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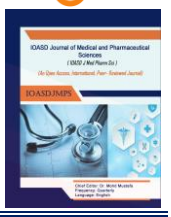

Governance Network of Ethics Committees in the Face of COVID-19

Cruz García Lirios[1*], Rosa María Rincón Ornelas[2], Juan Guillermo Mansilla Sepúlveda[3]
[1]Universidad de la Salud, CDMX, México
[2]Universidad de Sonora, Navojoa, México
[3]Universidad Católica de Temuco, Chile

Corresponding Author: Cruz García Lirios
Universidad de la Salud, CDMX, México.

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ABSTRACT

Ethics committees are the result of a learning process between the parties involved. The evaluative function of the projects focuses attention on transparency and accessibility to knowledge, but justified by the exceptional scenario represented by the pandemic. Therefore, the objective of the present work was to compare the structure of theoretical dimensions of bioethics with respect to the practical dimensions evaluated by expert judges. A cross-sectional, correlational and exploratory study was carried out with a sample selected for its bioethical practice, as well as for its updating and specialization in review of bioethical documents. The results confirm transparency as a guiding axis, although accessibility is far from being part of a governance system that is rather focused on the sustainability of the evaluation committees. For its part, the state of the art highlights that these findings are inherent to an exceptionality that this work places as the beginning of transparency and sustainability.

Keywords: Accessibility, Ethics Committees, COVID-19, Sustainability, Transparency.

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INTRODUCTION

Ethics committees have a history dating back several decades and have been developed primarily in response to the need to protect the rights and well-being of individuals in research and medical practices (Capella, 2020). The concept of research ethics began to gain importance as concerns about human experimentation grew. A notable case was the Tuskegee experiment, which began in 1932 and consisted of a study on syphilis in African American men without their proper informed consent. After World War II and the Nuremberg trials, where inhumane experiments conducted by Nazi doctors were revealed, the Nuremberg Code was established. This code was one of the first documents to establish ethical guidelines for medical research, emphasizing informed consent and the need to avoid unnecessary suffering.

The World Medical Association adopted this declaration, which expanded and specified the ethical principles for medical research, including the need for ethical review by independent committees (Rubio, 2022). This marked an important step towards the formalization of research ethics committees. Published in the United States, this report identified three fundamental ethical principles for research involving human subjects: respect for persons (including informed consent), beneficence (maximizing benefits and minimizing harms), and justice (equitable distribution of benefits and research risks). These principles guided the creation of institutional review boards (IRBs) in the US. Over the past decades, many countries have developed their own regulations and ethics committees to ensure that research meets ethical standards. Organizations such as UNESCO and the World Health Organization have promoted ethics in research globally.

Ethics committees, also known as ethical review boards or institutional review boards (IRBs), have the function of reviewing and approving research protocols to ensure that they comply with ethical standards (Dadalto, Royo & Costa, 2020). Its main objective is to protect the rights, safety and well-being of research participants. This includes: Evaluate the risks and benefits of the research. Ensure that participants provide informed consent. Supervise the development of the research to guarantee compliance with ethical principles.

With the advancement of biotechnology and the globalization of research, ethics committees face new challenges, such as genetic research, artificial intelligence and the use of personal data. More sophisticated standards have been adopted to address these issues, and ethics committees continue to evolve to adapt to changes in science and society. Ethics committees have evolved significantly since the mid-20th century, with an increasing focus on protecting the rights of individuals and ethical responsibility in research. Its development has been crucial to establishing global standards and ensuring responsible and humane research practices.

Ethics theory is a field of philosophical study that deals with questions of morality and reasoning about what is right and wrong (Concha et al., 2020). There are several ethical theories that offer different approaches to determining the principles and rules that guide moral behavior. Deontological ethics, often associated with philosopher Immanuel Kant, focuses on moral norms and duties. According to this theory, certain actions are morally right or wrong in themselves, regardless of the consequences they may produce.

Kant formulated the principle of the categorical imperative, which states that one must act in accordance with the maxim that one would wish to become a universal law (Albuquerque et al., 2020). This means that, before acting, one must consider whether the rule behind the action could be applied universally without contradiction. Utilitarian ethics, defended by philosophers such as Jeremy Bentham and John Stuart Mill, hold that the morality of an action depends on its consequences. According to utilitarianism, the correct action is that which maximizes the happiness or total well-being of those affected. This principle posits that actions should be evaluated by their ability to produce the greatest good for the greatest number of people. This involves considering the results of actions and choosing those that maximize pleasure and minimize pain.

Virtue ethics focuses on the moral character and virtues of the individual rather than on specific rules for action (Ten Have, 2022). Originating in the teachings of Aristotle, this theory holds that the development of good character qualities (virtues) such as honesty, justice, courage, and generosity is fundamental to the moral life. Aristotle proposed that the goal of human life is to achieve eudaimonia, often translated as "happiness" or "flourishing," which is achieved by living a life of virtue. The ethics of care highlights the importance of interpersonal relationships and the responsibility of caring for others. It is often associated with philosophers such as Carol Gilligan and Virginia Held, who argue that morality cannot be fully understood without recognizing the importance of context, emotions, and human relationships. This theory emphasizes human interdependence and the need to care and worry about others, especially in contexts of vulnerability.

Contractualism is a theory that maintains that moral and political norms are derived from an implicit social contract between individuals (Mesa-Trujillo, Espinosa-Ferro & García-Mesa, 2022). Thinkers such as Thomas Hobbes, John Locke, and Jean-Jacques Rousseau have contributed to this perspective. According to contractualism, just rules and laws are those that rational individuals would accept in a position of equality and with full information. Morality is therefore based on a mutual agreement to coexist in a society. Ethical relativism maintains that moral judgments are relative to the cultural or individual context. According to this theory, there are no universal moral standards; What is considered right or wrong varies according to the beliefs and practices of different societies or individuals.

Relativism recognizes the diversity of moral practices and beliefs and suggests that there is no single correct way to live ethically (García, 2020). Existentialism, associated with philosophers such as Jean-Paul Sartre and Simone de Beauvoir, emphasizes individual freedom and personal responsibility in the creation of meaning and moral values. According to this view, individuals are free to choose their own values and must take responsibility for their choices. Existentialists advocate living authentically, recognizing and accepting the freedom and responsibility inherent in the human condition.

Each of these theories provides a different perspective on how to approach ethical problems and how to determine which actions are morally right (Storto et al., 2022). Although they may differ in their foundations and approaches, they all seek to answer fundamental questions about morality and ethical living.

Ethics committees have more of a legitimizing potential than an evaluative or critical one (Camarena, 2020). This issue is seen in the categories that these committees use in order to regulate the volume and quality of the studies under scrutiny. In exceptional situations, the committees modified their dynamics to adjust to the demands for information and knowledge related to COVID-19. In such a process, transparency is crucial to generate uncertainty among the parties involved and its possible dissemination in hearings.

A crossroads prevails between the promptness of clinical trials with respect to the evaluations of ethics committees (García Uribe et al., 2023). Moral duty reduces uncertainty in decision making. Expeditious investigation without prejudice to subjects of experimentation and erroneous information. Ethics committees agreed to expedited reviews and oversight in studies related to COVID-19. In Galicia, the ethics committees agreed to telematic meetings, an increase in sessions, a reduction in quorum and flexibility. Evaluations and deliberative meetings outside of working hours. Recommendation to reduce clinical trial

requests, modifications and avoid including new patients. Transparency as an axis of social legitimation. Methodological rigor as a prevailing factor. Uncertainty and ignorance preferable to erroneous knowledge. The data constructed is private or social.

Ethics committees seem to have limited their critical and evaluative potential to become instruments of legitimization of fastrack studies that took advantage of the pandemic to increase their number of trials and make their experimental conditions more flexible (Lopes, Dantas & Amorim, 2023). In this sense, the parties involved generated information that could be interpreted as reliable, although also as erroneous in the face of the health crisis. In this interface, ethics committees found themselves at the crossroads of being instruments of legitimation, or strengthening their evaluative potential, since the context seems to inhibit criticism of the studies that contributed to the solution of the health crisis.

The pandemic was an exceptional period of humanity that involved various parties around the provisional or systematic solution to a crisis of contagion, disease and death (Linares-Salgado, 2022). Faced with this situation, ethics committees and even clinical trials or laboratory experiments seem to be minimal. In this way, an agreement was woven between the parties involved in order to make their demands more flexible and direct their objectives towards cooperation. In such a scenario, the ethics committees activated a protocol to adjust to the circumstances to the detriment of their evaluative or critical potential. Precisely, this solidarity agreement allowed the volume of studies to increase and the ethics committees themselves end up recommending their reduction. Therefore, let the pandemic serve to remind us that quantity cannot replace quality.

The governance of ethics committees, also known as research ethics committees or ethical review committees, is crucial to ensure that research is conducted ethically and in accordance with legal regulations and international standards (Villagómez et al., 2022). Governance involves the structures, policies, and procedures that guide the operation and decision-making of these committees. Ethics committees are typically composed of members with diverse areas of expertise, including doctors, scientists, lawyers, theologians, philosophers, and community representatives. This diversity guarantees a complete and balanced evaluation of the ethical aspects of the research. The inclusion of members who represent the interests of research subjects and the broader community is crucial to ensure that decisions are not made solely from a scientific or institutional perspective. It is essential that ethics committees operate independently of the researchers and the institutions that sponsor the research, to avoid conflicts of interest and ensure impartial decisions.

Ethics committees analyze the potential risks and benefits of research projects, ensuring that risks are minimized and potential benefits are maximized (Rubio, 2022). They verify that the procedures for obtaining informed consent from participants are adequate and that they clearly understand the risks, benefits and procedures of the research. In addition to the initial review, ethics committees are responsible for monitoring ongoing research to ensure that ethical standards continue to be met and that any adverse events or issues are appropriately managed. They have a particular focus on the protection of vulnerable subjects, such as minors, people with cognitive disabilities, or economically disadvantaged populations, ensuring additional measures to protect their rights and well-being.

They establish procedures for the initial review of projects and periodic reviews to monitor their progress (Izquierdo, 2021). In some cases, expedited review is permitted for minimal risk studies, although these procedures must also be clearly defined and transparent. Committees must maintain detailed records of all reviews, decisions, and communications related to the investigation. This includes documentation of the informed consent process, decisions on protocol approval, and any amendments to studies. It is essential to maintain the confidentiality of information provided by research participants and the results of ethical review, especially with regard to sensitive or private data. Members of ethics committees must receive continuous training in research ethics, as well as current regulations and standards. This ensures that they are aware of the latest developments and can make informed decisions.

Ethics committees must operate in accordance with national and international laws and regulations, as well as the guidelines of organizations such as the World Health Organization (WHO) and the Declaration of Helsinki (Matos et al., 2023). The activities of ethics committees may be subject to supervision and audit by regulatory authorities to ensure that they comply with ethical and legal standards. Ethics committees should periodically evaluate their own performance to identify areas for improvement. This may include evaluating the efficiency of review procedures, the quality of decisions, and member training. It is essential that committees implement clear policies to identify and manage potential conflicts of interest among their members. This may involve disqualifying members from certain reviews where there is a potential or actual conflict of interest.

The governance of ethics committees is an integral aspect of ensuring that research is conducted ethically and respectful of the rights of participants (see Table 1). This involves a combination of organizational structure, clear procedures, ongoing training, and a commitment to transparency and the protection of human rights.

Table 1: Comparison of ethics committees

Dimension	Deontological Ethics	Utilitarian Ethics	Virtue Ethics	Ethics of Care	Contractualism	Relativistic Ethics
Moral Foundation	Duties and universal moral rules	Consequences and maximization of well-being	Character and moral virtues	Relationships and caring responsibilities	Social contract and mutual agreement	Cultural context and relative norms
Committee Structure	Focus on fair and equitable representation	Composition that considers welfare maximization	Members with strong character qualities	Inclusion of representatives sensitive to vulnerable contexts	Diversity to reflect diverse social arrangements	Inclusion of diverse cultural perspectives
Principal functions	Evaluation of conformity with universal principles	Risk-benefit analysis to maximize profit	Promotion of ethical practice and moral development	Focus on protecting the most vulnerable	Establishment of consensus-based standards	Acceptance of various practices according to culture
Protocol Review	Strict adherence to ethical principles	Cost-benefit analysis of the studies	Evaluation of moral intentionality	Evaluation of the impact on interpersonal relationships	Determination of social acceptance of norms	Flexibility to adapt procedures to local standards
Consent Procedures	Focus on informed and voluntary consent	Ensure that consent maximizes well-being	Promote respect and honesty in the process	Ensure participants understand their participation	Consent based on mutual understanding	Adjust procedures according to cultural sensitivities
Continuous monitoring	Monitoring adherence to standards	Monitoring to avoid damage and maximize benefits	Promoting continued ethical behavior	Ensure the emotional and social well-being of participants	Review in accordance with pre-established agreements	Supervision according to local standards
Management of Conflicts of Interest	Impartiality based on moral duties	Avoid decisions that reduce total well-being	Promote honesty and transparency	Ensure decisions that do not harm key relationships	Declaration and transparent management of conflicts of interest	Consideration of the relativity of conflicts according to the context
Transparency and Documentation	Strict record of rules-based decisions	Documentation focused on the impact of decisions	Recording of processes and decisions with a focus on character ethics	Documenting impact on relationships and caregiving	Transparency based on agreed standards	Registration in accordance with cultural practices and sensitivities
Performance evaluation	Evaluation of adherence to ethical standards	Analysis of results in terms of welfare maximization	Review of promoting virtues among members	Evaluation of the care and protection provided	Evaluation of conformity with the social contract	Evaluation according to prevailing cultural norms

However, ethics committees have not been observed since their ethics self-reporting. Therefore, the objective of the present study is to carry out a comparison between the ethical theory reported in the literature with respect to the practice of ethics committees.

Are there significant differences between the ethical dimensions reported in the state of the art with respect to the dimensions observed in the present work?

Based on the premise according to which the anti-pandemic policies modified the dynamics of the investigations and the committees evaluating ethical procedures, significant differences are expected between the structure of the ethical dimensions reported in the literature with respect to the structure of the dimensions observed in the present work.

METHOD

Design

A cross-sectional, exploratory and correlational study was carried out with a sample of expert judges in systematic review and bioethics, considering their practice in research ethics evaluation committees, as well as literature review in the period from 2020 to 2024.

Instrument

The Prisma format was adapted to the Delphi technique in order to be able to subtract the dimensions practiced in ethics committees during the pandemic. The judges selected formats and deliberated on the exclusion and inclusion of questions in order to investigate the bioethical dimensions that surround the practice of the evaluation committees.

Procedure

Once the instrument has been selected and adapted. The judges proceeded to evaluate the selected summaries considering the review period, as well as the bioethical dimensions established in theoretical and practical terms. In three sessions they evaluated the summaries and recorded an initial rating in the first session, they compared their criteria with the average in the second phase and in a final participation they reiterated their rating or reconsidered it to modify it.

Analysis

The data were recorded in Excel, processed in R and JASP version 18. The coefficients of centrality, intermediation, connectivity, influence, profusion, grouping and structuring were estimated in order to be able to contrast the hypothesis related to the significant differences between the theoretical structure with regarding the empirical structure.

RESULTS

The centrality analysis suggests the establishment of networks around the intermediation, influence or proximity of a predominant node (see Table 1). The results show that the node related to the transparency of ethics committees is the node on which the other nodes transit in order to converge on a sustainable morality structure.

Table 1: Centrality measures per variable

	Network			
Variable	Betweenness	Closeness	Strength	Expected influence
Access	-0.243	0.000	-0.498	0.368
Clarity	-0.243	0.000	-0.498	0.368
Communication	-0.243	0.000	-0.498	0.368
Stake	-0.243	0.000	-0.498	0.368
Collaboration	-0.243	0.000	-0.498	0.368
Opinion	-0.243	0.000	-0.498	0.368
Coordination	-0.243	0.000	-0.498	0.368
Union	-0.243	0.000	-0.498	0.368
Technology	-0.243	0.000	-0.498	0.368
Platform	-0.243	0.000	-0.498	0.368
Innovation	-0.243	0.000	-0.498	0.368
Effectiveness	-0.243	0.000	-0.498	0.368
Surrender	-0.243	0.000	-0.498	0.368
Transparency	3,881	0.000	2,622	-3,110
Implementation	-0.243	0.000	1,219	-0.444
Impact	-0.243	0.000	2011	-1960
Sustainability	-0.243	0.000	0.617	0.724

The clustering analysis indicates the degree of profusion between the nodes and their convergence into a hegemonic node that the literature identifies as the sustained revision (see Table 2). The results indicate that sustainability in the argumentation of a review is the node around which the other nodes surround.

Table 2: Clustering measures per variable

	network			
Variable	Barrat	Onnela	W.S.	Zhang
Access	-0.531	-0.520	-0.525	-0.486
Platform	-0.531	-0.520	-0.525	-0.486
Innovation	-0.531	-0.520	-0.525	-0.486

Table 2: Clustering measures per variable				
	network			
Variable	Barrat	Onnela	W.S.	Zhang
Effectiveness	-0.531	-0.520	-0.525	-0.486
Surrender	-0.531	-0.520	-0.525	-0.486
Transparency	1,335	1,249	1,259	0.440
Implementation	2,046	2,497	2,151	2,408
Impact	1,476	1,249	1,259	1,066
Sustainability	2,046	1,769	2,151	2,408
Clarity	-0.531	-0.520	-0.525	-0.486
Communication	-0.531	-0.520	-0.525	-0.486
Stake	-0.531	-0.520	-0.525	-0.486
Collaboration	-0.531	-0.520	-0.525	-0.486
Opinion	-0.531	-0.520	-0.525	-0.486
Coordination	-0.531	-0.520	-0.525	-0.486
Union	-0.531	-0.520	-0.525	-0.486
Technology	-0.531	-0.520	-0.525	-0.486

The structuring analysis indicates the process of input and output of information in which ethics committees are immersed to carry out the practice of their regulatory criteria (see Table 3). The values are close to zero and suggest that transparency is the beginning of the information process which would culminate with the impact of transparency on the prestige of ethics committees.

Table 3: Weights matrix																		
	network																	
Access	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarity	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Communication	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Stake	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Collaboration	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Opinion	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coordination	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Union	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Technology	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Platform	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innovation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Effectiveness	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Surrender	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transparency	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-1,692	-2,209	1,028

Table 3: Weights matrix																		
	network																	
Implementation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-1,692	0.000	1,020	0.000	
Impact	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-2,209	1,020	0.000	-0.734	
Sustainability	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,028	0.000	-0.734	0.000	

The values of centrality, grouping and structuring suggest the non-rejection of the hypothesis related to the significant differences between the theoretical structure with respect to the evaluations of expert judges in systematic reviews of ethical evaluation committees.

DISCUSSION

The contribution of this work to the state of the art consists of the establishment of a neural network for learning ethics committees that was compared with the theoretical structure reported in the reviewed literature. The results demonstrate that the central axis of the bioethics agenda lies in transparency and argumentative sustainability.

The COVID-19 pandemic has raised numerous ethical considerations that have been addressed by various bioethics committees around the world (Pastor, 2020). The UNESCO International Bioethics Committee (IBC) has emphasized the importance of equal access to vaccines and therapies for all people (Ripollés, 2020). In Spain, the Bioethics Committee has provided recommendations on the prioritization of healthcare resources during the epidemic (Cruz Ayuso, 2022). Furthermore, bioethical concerns have been raised in various healthcare settings, such as emergency departments and research committees, highlighting the need for ethical reflection and decision-making (Bonella, de Araujo & Dall'Agnoll, 2020). The Advisory Committee on Immunization Practices has outlined four ethical principles to guide COVID-19 vaccine allocation decisions, emphasizing the importance of equity and transparency (Sánchez-García et al., 2021). Similarly, the Council of Europe's DH-BIO has issued statements on human rights considerations relevant to the pandemic, recognizing the ethical issues arising from advances in biomedicine during this time.

The COVID-19 pandemic has highlighted the importance of global reflection on bioethics, as seen in the recommendations of the Belgian Bioethics Advisory Committee and the call for a global approach to ethics during the pandemic (Girotto, 2022) . As we continue to face the challenges of the COVID-19 pandemic, it is essential to consider the ethical implications of our actions and decisions (Acosta Sariego, 2020). The changing nature of the pandemic requires constant ethical reflection and adaptation, as highlighted by the ethical challenges that have emerged and the need for a comprehensive ethical framework to guide our response (Sousa, 2023). By collaborating with bioethics committees and incorporating ethical principles into our decision-making processes, we can strive to address the complex ethical issues that arise during this unprecedented time.

In the present work, unlike the literature consulted where the importance of considering research in an exceptional way due to the health crisis stands out, rather the implementation of mechanisms of transparency and argumentative sustainability is recommended in order to achieve dialogue between the involved parts. Precisely, the area of opportunity of this work lies in establishing a decalogue that allows consensus in the evaluation of research projects. Based on these new transdisciplinary guidelines, it will be possible to reach minimum standards of discussion that allow co-responsibility between those who evaluate and are evaluated. It is highly recommended that in the case of the pandemic, the protocols adjust to higher standards in order to guarantee the efficiency and effectiveness of the solutions to COVID-19.

CONCLUSION

The objective of this work was to compare the theoretical structure of ethics committees reported in the literature with respect to the evaluations of expert judges in the field. The results demonstrate the prevalence of transparency and sustainability as the guiding axes of the learning network around bioethical practice. The state of knowledge suggests adjusting this bioethical practice to the exceptional nature of the pandemic, although they emphasize the prevalence of transparency and accessibility without considering the sustainability of the system. In this way, it is recommended to extend the review to specialized and updated literature on knowledge management in order to guarantee the governance of ethics committees as autonomous and responsible entities in the face of any exceptionality.

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Annex A

Governance Questionnaire of Bioethics Committees during the Pandemic

Section A: General Information

1. Socioeconomic and Sociodemographic Data

- Age:
- [ ] Less than 30 years old
- [ ] 30-39 years
- [ ] 40-49 years
- [ ] 50-59 years
- [ ] 60 years or older
- Gender:
- [ ] Male
- [ ] Female
- [ ] Other
- [ ] I prefer not to say
- Occupation:
- [ ] Health professional
- [ ] Researcher
- [ ] Academic
- [ ] Student
- [ ] Other: _____
- Monthly income level:
- [ ] Less than $1000 USD
- [ ] $1000-$3000 USD
- [ ] $3000-$5000 USD
- [ ] More than $5000 USD
- Country of residence:
- [ ] _____

2. Socio-educational data

- Highest level of education achieved:
- [ ] Secondary
- [ ] Technical or diploma
- [ ] Degree
- [ ] Master's degree
- [ ] Ph.D.
- [ ] Other: _____
- Areas of academic or professional specialization:
- [ ] Medicine
- [ ] Social Sciences
- [ ] Right
- [ ] Philosophy/Bioethics
- [ ] Public Health Sciences
- [ ] Other: _____

3. Experience in Ethics Committees

- Years of experience in ethics committees:
- [ ] Less than 1 year
- [ ] 1-3 years
- [ ] 3-5 years
- [ ] More than 5 years
- Main role in the ethics committee:
- [ ] Committee member
- [ ] President/Coordinator
- [ ] Legal advisor
- [ ] Community representative
- [ ] Other: _____

Section B: Assessment of Committee Governance during the Pandemic

1. Structure and Composition of the Committee
- Do you think the composition of the committee was diverse enough to address ethical challenges during the pandemic?
- [ ] Totally agree
- [ ] OK
- [ ] Neutral
- [ ] In disagreement
- [ ] Strongly disagree
- Were additional experts (e.g. in infectious diseases) brought in during the pandemic?
- [ ] Yeah
- [ ] No
- [ ] Does not apply

2. Review and Approval of Research Protocols
- Were expedited protocol reviews carried out due to the urgency of the pandemic?
- [ ] Always
- [ ] Frequently
- [ ] Sometimes
- [ ] Rarely
- [ ] Never
- How do you rate the clarity of the criteria for approving research related to COVID-19?
- [ ] Very clear
- [ ] Clear
- [ ] Neutral
- [ ] Unclear
- [ ] Very unclear

3. Informed Consent
- Were informed consent procedures adequate to ensure participant understanding?
- [ ] Totally agree
- [ ] OK
- [ ] Neutral
- [ ] In disagreement
- [ ] Strongly disagree
- Were there any specific challenges faced in obtaining consent during the pandemic?
- [ ] Yeah
- [ ] No
- If you answered "Yes", briefly describe: _____

4. Continuous Monitoring and Supervision
- Were changes implemented in monitoring procedures due to the pandemic?
- [ ] Yeah
- [ ] No
- If you answered "Yes", what were these changes?: _____
- How do you rate the effectiveness of continuous monitoring during the pandemic?
- [ ] Very effective
- [ ] Effective
- [ ] Neutral
- [ ] Not very effective
- [ ] Very ineffective

5. Management of Conflicts of Interest
- Were conflicts of interest related to COVID-19 research identified and appropriately managed?

- [ ] Totally agree
- [ ] OK
- [ ] Neutral
- [ ] In disagreement
- [ ] Strongly disagree

6. Transparency and Communication
- Was the committee transparent in its decisions and adequately communicated its actions?
- [ ] Totally agree
- [ ] OK
- [ ] Neutral
- [ ] In disagreement
- [ ] Strongly disagree

7. Protection of Vulnerable Subjects
- Were additional measures taken to protect vulnerable subjects during the pandemic?
- [ ] Yeah
- [ ] No
- If you answered "Yes", describe the measurements: _____

8. Evaluation and Continuous Improvement
- Did the committee evaluate your performance and make improvements during the pandemic?
- [ ] Yeah
- [ ] No
- If you answered "Yes", what type of evaluations were carried out?: _____

9. Challenges and Lessons Learned
- What were the main challenges that the committee faced during the pandemic?
- Open answer: _____
- What lessons were learned to improve the governance of ethics committees in future emergencies?
- Open answer: _____

Annex B

```
import numpy as np
import pandas as pd
from sklearn.model _selection import train_test_split
from sklearn.preprocessing import StandardScaler, LabelEncoder
from keras.models import Sequential
from keras.layers import Dense
# Step 1: Data Preparation
# Suppose the data has been stored in a pandas DataFrame.
# Here we upload an example CSV containing the answers to the questionnaire.
# Columns include demographic data and Likert scale responses.
# Load questionnaire data
data = pd.read _csv('questionnaire_data.csv')
# Encode categorical data (e.g. gender, occupation)
label_encoders = {}
for column in ['Gender', 'Occupation']:
le = LabelEncoder( )
   data[column] = le.fit_transform(data[column])
   label_encoders[column] = le
# Select features and tags
# Here we assume that 'Label' is the output column for a monitored task.
X = data.drop (columns=['Label'])
y = data['Label']
# Normalize numerical features
scaler = StandardScaler( )
X_scaled = scaler.fit_transform(X)
# Split the data into training and test sets
X_train, X_test, y_train, y_test = train_test_ split( X_scaled, y, test_size=0.2, random_state=42)
#Step 2: Defining the neural network architecture
model = Sequential( )
model.add( Dense(64, input_dim=X_train.shape[1], activation='relu')) # Input layer and hidden layer
model.add( Dense(32, activation='relu')) # Hidden layer
```

```
model.add( Dense(1, activation='sigmoid')) # Output layer (for binary classification)
#Step 3: Build the model
model.compile (optimizer='adam', loss='binary_crossentropy', metrics=['accuracy'])
#Step 4: Training the model
model.fit( X_train, y_train, epochs=50, batch_size=10, validation_data=(X_test, y_test))
#Step 5: Model evaluation
loss, accuracy = model.evaluate (X_test, y_test)
print( f'Loss on test set: {loss}')
print( f'Accuracy on test set: {accuracy}')
```